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EXAMINER	
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ART UNIT	PAPER NUMBER
2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,789	WANG ET AL.	
	Examiner	Art Unit	
	AARON SANDERS	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37,39-41,72-74 and 76-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37,39-41,72-74 and 76-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/08/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed 8 January 2009 has been entered. Claims 37, 39-41, 72-74, and 76-82 are pending. Claims 37, 72, 74, 76, and 78-81 are currently amended. Claims 1-36, 38, 42-71, and 75 are cancelled. No claims are new. This action is FINAL, as necessitated by amendment.

Claim Objections

As per claim 37, the phrase "the associated frequently asked questions" lacks antecedent basis in the claim.

As per claim 72, the phrase "the set of concepts" lacks antecedent basis in the claim. It appears that it should be "the collection of concepts."

As per claim 78, the phrase "the associated collection of concepts" lacks antecedent basis in the claim.

Claim Rejections - 35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 37 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 37, "the selection of the parsed output" lacks antecedent basis in the claim. This also makes it unclear how the limitations "wherein the selection... the coverage being determined... and the probabilities comprising" relate to the rest of the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 37-41 and 72-77 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The processes of claims 37 and 72 are not statutory because abstract ideas alone are not patentable. To be patentable, a process must have a practical application and (1) be tied to a particular machine or (2) transform a particular article into a different state. *In re Comiskey*, 499 F.3d 1365, 1376-77 (Fed. Cir. 2007).

Here, a human could perform the steps of the method using a generic computer. To be sufficiently "tied," a method claim must require that the steps of the process be performed by a machine. That is not the case here, thus the claims are not statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 37-41 and 78-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turtle, U.S. 5,418,948 ("Turtle"), in view of Molloy, U.S. 5,787,234 ("Molloy"), and in view of Warthen, U.S. 6,584,464 ("Warthen").

37. Turtle teaches "*A method comprising: defining rules associated with semantic classes of a grammar*," see col. 9, ll. 1-17, "Phrases are recognized using syntactic techniques based on the word/term structure and grammatical rules, rather than statistically."

Turtle teaches "*receiving a query*," see Fig. 4, "Enter Natural Language Query."

Turtle teaches "*segmenting the query into segments*," see Fig. 4, "Parse words into List," where the claimed "segments" are the referenced "words."

Turtle teaches "*mapping the query from a query space to a question space to identify associated frequently asked questions (FAQ), the mapping comprising: generating a parsed output by parsing parsable segments of the query*," see Fig. 4 and col. 8, ll. 60-67, "As a result of step 56 a list of words is developed as shown in block 42, the list comprising the stems of all words in the query, except the stopwords," where the claimed "parsable segments" are the referenced "words… except the stopwords."

Turtle teaches "*wherein the selection of the parsed output is based on a coverage of one or more of the rules against the query*," see col. 9, ll. 1-17, "Phrases are recognized using syntactic techniques based on the word/term structure and grammatical rules, rather than statistically." Turtle further teaches "*the coverage being determined based on probabilities learned from using data in a log database as training data, the probabilities comprising confidence values represented continually and associated with each item in the one or more of*

the rules," see Fig. 4 and col. 9, l. 55 – col. 10, l. 20, "At step 58 in FIG. 4, computer 20 returns to the database in ROM 24 to determine the presence of phrases within the parsed and stemmed list 42. The phrase database in ROM 24 comprises professional, domain-specific phrases (such as from Black's Law Dictionary) which have had stopwords removed therefrom and which have been stemmed in accordance with the same procedure for stemming the words of a search query. Computer 20 compares the first and second words of list 42 to the database of phrases in ROM 24 to find any phrase having at least those two words as the first words of a phrase," where the claimed "log database" is the referenced "phrase database" and the claimed "confidence values" are the referenced matching.

Turtle teaches "*wherein the parsed output comprises one or more parsed concepts selected from a set of concepts, wherein the one or more parsed concepts comprise at least one of a parse tree and a partially parsed fragment*," see Fig. 1 and col. 7, ll. 1-16, "For example, a query manifesting the concept 'employee' may be represented by one or more of 'actor,' 'agent,' 'attendant,' 'craftsman,' 'doer,' 'laborer,' 'maid,' 'servant,' 'smith,' 'technician' and 'worker,' to name a few. These various representation nodes are created from the query node at the time of the search," where the claimed "parsed output" and "parsed concept" are the referenced "employee" and could be represented as the claimed "parse tree" with the "actor," "agent," etc. as children nodes.

Turtle teaches "*and returning and storing the answers in response to the query*," see Fig. 10, "Printout & Display."

Turtle does not teach "*analyzing the log database to determine a relevance of previously stored frequently asked questions to the query, the determination of the relevance comprising*."

Molloy does, however, see col. 4, ll. 15-28, "The adaptive learning system is initialized by loading into the system cases which typically were derived from previous experience," where the claimed "log database" is the referenced database of previous cases. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*processing the log database over time to provide relevance-feedback learning to facilitate a derivation of weighting factors that indicate how relevant each previously stored frequently asked question is to each of the set of concepts.*" Molloy does, however, see col. 2, l. 66 – col. 3, l. 11, "First, while new cases are easily added to a neural network, the system must then 'study' its entire case base to absorb the implications of the new information, resetting the mathematical weightings of the associations between data elements." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*and using the derived weighting factors to calculate an associated correlation between each of the previously stored frequently asked questions and the one or more parsed concepts, whereby each associated correlation indicates how relevant each*

previously stored frequently asked question is to the query." Molloy does, however, see col. 4, l. 58 - col. 5, l. 9, "These two numbers are then weighted in accordance with a weighting algorithm and the weighted values are combined to generate a score which determines the order in which the concepts are presented in an output list stored in short-term memory," where the claimed "correlation" is the referenced "score." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*and ascertaining from the previously stored frequently asked questions the associated frequently asked questions based on the determined relevance*." Molloy does, however, see col. 4, l. 58 - col. 5, l. 9, "These two numbers are then weighted in accordance with a weighting algorithm and the weighted values are combined to generate a score which determines the order in which the concepts are presented in an output list stored in short-term memory," where the claimed "associated frequently asked questions" are in the referenced "output list." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*mapping the associated frequently asked questions from the question space to a template space to identify associated templates.*" Warthen does, however, see col. 3, ll. 41-51, "QPE 30 is coupled to dictionary 34 and semantic net snapshot 40 and uses the information obtained from those sources to generate template questions in response to a user-entered question." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

Turtle does not teach "*mapping the templates from the template space to an answer space to identify associated answers.*" Warthen does, however, see col. 3, ll. 41-51, "Template questions are questions that are mapped to answers in question-answer mapping table 42." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

39. Turtle does not teach "*The method as recited in claim 37, wherein the mapping from the question space to the template space comprises cross-indexing from a first table containing question identifications to a second table containing template identifications.*" Warthen does, however, see col. 3, ll. 41-51, "a knowledge base 36, which comprises storage for a semantic net snapshot 40 and a question-answer mapping table 42. QPE 30 is coupled to dictionary 34 and semantic net snapshot 40 and uses the information obtained from those sources to generate template questions in response to a user-entered question." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of

the cited references because Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

40. Turtle does not teach "*The method as recited in claim 39, wherein the mapping from the template space to the answer space comprises cross-indexing from the second table to a third table containing answer identifications.*" Warthen does, however, see col. 3, ll. 41-51, "Template questions are questions that are mapped to answers in question-answer mapping table 42." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

41. Turtle does not teach "*The method as recited in claim 37, further comprising: presenting the answers to a user for confirmation as to which of the answers represent the user's intentions in the query.*" Warthen does, however, see Fig. 3. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

Turtle does not teach "*analyzing the query and the answers confirmed by the user.*" Warthen does, however, see col. 5, ll. 8-14, "FIG. 3 shows an example display 90 resulting from such a questions display page. From that display 90, the user can select the desired template question and parameters, or can select a button 92 for more answers, resulting in a display such as that shown in FIG. 4." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because

Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

Turtle does not teach "*and modifying the answers that are returned in response to the query based on information gleaned from the analyzing*." Warthen does, however, see Figs. 3 and 4. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide a standardized user interface, see Warthen col. 3, ll. 41-56.

78. Turtle teaches "*A system comprising: a processor; a memory*," see Fig. 3, e.g. "ROM" 24 and "Computer" 20.

Turtle teaches "*a segmentation module stored in the memory and executed by the processor that segments a search query into one or more individual character strings*," see Fig. 4, "Parse words into List," where the claimed "segments" are the referenced "words."

Turtle teaches "*a natural language parser module stored in the memory and executed by the processor that produces a parsed result comprising a parse tree from one or more parsable character strings of the search query, the parse tree representing a collection of concepts selected from a set of concepts*," see Figs. 1, 4, col. 8, ll. 60-67, "As a result of step 56 a list of words is developed as shown in block 42, the list comprising the stems of all words in the query, except the stopwords," and col. 7, ll. 1-16, "For example, a query manifesting the concept 'employee' may be represented by one or more of 'actor,' 'agent,' 'attendant,' 'craftsman,' 'doer,' 'laborer,' 'maid,' 'servant,' 'smith,' 'technician' and 'worker,' to name a few. These various representation nodes are created from the query node at the time of the search."

Turtle teaches "*and a question matcher module stored in the memory and executed by the processor to identify the most relevant frequently asked questions based on the determined relevance and present at least one of one or more answers to a user in a user interface that best match the most relevant frequently asked questions*," see Fig. 10, "Rank" 162 and "Printout & Display" 164.

Turtle does not teach "*and a keyword searcher module stored in the memory and executed by the processor to identify one or more keywords in the search query and to output the one or more keywords*." Warthen does, however, see col. 4, ll. 31-42, "The initial user query can be a natural language question (e.g., 'Where can I find information on the sport bicycling?') and may well include grammatical errors, or a set of keywords, such as 'info sport bicycling'… When the user presses button 84, the initial user query is sent to information server 50 and client interface 60 passes the query to QPE 30," where keywords have clearly been identified and "output" to QPE. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide keyword searching, see Warthen col. 6, ll. 9-14.

Turtle does not teach "*and a log analyzer module stored in the memory and executed by the processor that utilizes data in a log database to adapt how the natural language parser module selects the parsed result based on learned confidence values associated with coverage of semantic rules against the search query, wherein the confidence values are learned utilizing the data in the log database as training data*," see Fig. 4, col. 9, ll. 1-17, "Phrases are recognized using syntactic techniques based on the word/term structure and grammatical rules, rather than

statistically," and col. 9, l. 55 – col. 10, l. 20, "At step 58 in FIG. 4, computer 20 returns to the database in ROM 24 to determine the presence of phrases within the parsed and stemmed list 42. The phrase database in ROM 24 comprises professional, domain-specific phrases (such as from Black's Law Dictionary) which have had stopwords removed therefrom and which have been stemmed in accordance with the same procedure for stemming the words of a search query. Computer 20 compares the first and second words of list 42 to the database of phrases in ROM 24 to find any phrase having at least those two words as the first words of a phrase," where the claimed "log database" is the referenced "phrase database" and the claimed "confidence values" are the referenced matching.

Turtle does not teach "*derive weighting factors that indicate a degree of correlation between each of a list of frequently asked questions and each of the set of concepts.*" Molloy does, however, see col. 2, l. 66 – col. 3, l. 11, "First, while new cases are easily added to a neural network, the system must then 'study' its entire case base to absorb the implications of the new information, resetting the mathematical weightings of the associations between data elements." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*and use the derived weighting factors to determine a relevance between each of the list of frequently asked questions and the associated collection of concepts.*" Molloy does, however, see col. 4, l. 58 - col. 5, l. 9, "These two numbers are then weighted in

accordance with a weighting algorithm and the weighted values are combined to generate a score which determines the order in which the concepts are presented in an output list stored in short-term memory," where the claimed "correlation" is the referenced "score." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

79. Turtle teaches "*The system of claim 78, wherein the collection of concepts are related to the search query*," see Fig. 1, concepts c_1-c_m and query q_1-q_2.

80. Turtle teaches "*The system of claim 78, further comprising a search module that matches the parsed concepts to the list of frequently asked questions*," see Fig. 1, concepts c_1-c_m and content representation nodes r_1-r_k.

81. Turtle teaches "*The system of claim 80, wherein the search module: identifies at least one answer associated with the list of frequently asked questions that match the parsed concepts and keywords*," see Fig. 10, "Rank" 162.

Turtle teaches "*and presents the at least one answer to the user in the user interface that permits the user to select a desired answer from the one or more answers*," see Fig. 10, "Printout & Display" 164.

82. Turtle does not teach "*The system of claim 81, wherein the search module: logs the search query and at least one answer selected by the user in the log database.*" Molloy does, however, see col. 4, ll. 15-28, "For example, if the system application is as a help desk that is

used in maintaining a computer network, each of the cases that is initially input into the system might identify a user, the equipment he is using, a problem previously encountered with the equipment, a diagnosis of the cause of the problem and a recommended action that was taken to solve the problem. The cases are stored by the processor in the case table in long-term memory." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*and analyzes the log database to derive at least one weighting factor indicating how relevant the frequently asked questions are to the parsed concepts and keywords.*" Molloy does, however, see col. 4, ll. 15-28, "The adaptive learning system is initialized by loading into the system cases which typically were derived from previous experience," where the claimed "log database" is the referenced database of previous cases. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Claims 72-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turtle, U.S. 5,418,948 ("Turtle"), in view of Molloy, U.S. 5,787,234 ("Molloy"), and in view of Fung et al., U.S. 6,687,689 ("Fung"), and in view of Warthen, U.S. 6,584,464 ("Warthen").

72. Turtle teaches "*A computer implemented method of parsing a search query, the method comprising*: segmenting the search query into individual character strings," see Fig. 4, "Parse words into List." Turtle does not teach "*wherein at least one of the individual character strings comprises a single character*." Fung does, however, see Fig. 4 and col. 8, ll. 13-28, "Preferably, the query includes Chinese characters or syllables that were entered by a user at a first geographic location. Next, in a step 415, the document finder 301 determines words within the query." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Fung's teachings would have allowed Turtle's method to gain greater versatility in searching the Internet, see Fung col. 2, ll. 3-14.

Turtle teaches "*producing one or more outputs from the individual character strings, the one or more outputs selected from a group consisting of: a parse tree produced from at least one parsable character string of the search query; a partially-parsed fragment produced from one or more partially parsable character strings of the search query*," see Fig. 1 and col. 7, ll. 1-16, "For example, a query manifesting the concept 'employee' may be represented by one or more of 'actor,' 'agent,' 'attendant,' 'craftsman,' 'doer,' 'laborer,' 'maid,' 'servant,' 'smith,' 'technician' and 'worker,' to name a few. These various representation nodes are created from the query node at the time of the search," where the claimed "parsed output" and "parsed concept" are the

referenced "employee" and could be represented as the claimed "parse tree" with the "actor," "agent," etc. as children nodes.

Turtle teaches "*wherein a produced parse tree and a produced partially-parsed fragment represent a collection of concepts*," see Fig. 1, c_1-c_m. Turtle teaches "*the collection of concepts selected based on coverage of one or more semantic class rules against the search query*," see col. 9, ll. 1-17, "Phrases are recognized using syntactic techniques based on the word/term structure and grammatical rules, rather than statistically." Turtle teaches "*the coverage determined based on learned confidence values associated with each item in the one or more of the semantic class rules, the confidence values learned by using data in a log database as training data*," see Fig. 4 and col. 9, l. 55 – col. 10, l. 20, "At step 58 in FIG. 4, computer 20 returns to the database in ROM 24 to determine the presence of phrases within the parsed and stemmed list 42. The phrase database in ROM 24 comprises professional, domain-specific phrases (such as from Black's Law Dictionary) which have had stopwords removed therefrom and which have been stemmed in accordance with the same procedure for stemming the words of a search query. Computer 20 compares the first and second words of list 42 to the database of phrases in ROM 24 to find any phrase having at least those two words as the first words of a phrase," where the claimed "log database" is the referenced "phrase database" and the claimed "confidence values" are the referenced matching.

Turtle teaches "*identifying the most relevant of the previously stored frequently asked questions*," see Fig. 10, "Rank" 162.

Turtle teaches "*and presenting at least one of one or more answers to a user in a user interface associated with the identified most relevant of the previously stored frequently asked questions*," see Fig. 10, "Printout & Display" 164.

Turtle does not teach "*and at least one keyword generated based at least on one non-parsable character string of the search query*." Warthen does, however, see Fig. 8 and col. 6, ll. 9-14, "Once keywords are mapped to questions, the questions are mapped to answers using question-answer mappings 202. A small portion 204 of semantic net 200 is shown in detail in FIG. 8." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide keyword searching, see Warthen col. 6, ll. 9-14.

Turtle does not teach "*determining a relevance of a list of frequently asked questions (FAQ) to the search query, the determination of the relevance comprising: processing a log database to derive weighting factors that indicate how relevant each previously stored frequently asked question is to each of the set of concepts*." Molloy does, however, see col. 2, l. 66 – col. 3, l. 11, "First, while new cases are easily added to a neural network, the system must then 'study' its entire case base to absorb the implications of the new information, resetting the mathematical weightings of the associations between data elements." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*and using the derived weighting factors to calculate an associated correlation between each of the previously stored frequently asked questions and the collection of concepts, whereby each associated correlation indicates how relevant each previously stored frequently asked question is to the search query.*" Molloy does, however, see col. 4, l. 58 - col. 5, l. 9, "These two numbers are then weighted in accordance with a weighting algorithm and the weighted values are combined to generate a score which determines the order in which the concepts are presented in an output list stored in short-term memory," where the claimed "correlation" is the referenced "score." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

73. Turtle does not teach "*The method of claim 72, further comprising: conducting keyword searching using the at least one keyword.*" Warthen does, however, see col. 1, ll. 8-19, "initiate a search with a particular set of keywords." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Warthen's teachings would have allowed Turtle's method to provide keyword searching, see Warthen col. 6, ll. 9-14.

74. Turtle teaches "*The method of claim 72, wherein the collection of concepts are related to the search query,*" see Fig. 1.

76. Turtle teaches "The method of claim 72, further comprising: identifying at least one answer associated with the list of frequently asked questions that match the parsed concepts and keywords," see Fig. 10, "Rank" 162.

Turtle teaches "*and presenting the at least one answer to the user in the user interface that permits the user to select a desired answer from the one or more answers*," see Fig. 10, "Printout & Display" 164.

77. Turtle does not teach "*The method of claim 76, further comprising: logging the search query and at least one answer selected by the user in a log database*." Molloy does, however, see col. 4, ll. 15-28, "For example, if the system application is as a help desk that is used in maintaining a computer network, each of the cases that is initially input into the system might identify a user, the equipment he is using, a problem previously encountered with the equipment, a diagnosis of the cause of the problem and a recommended action that was taken to solve the problem. The cases are stored by the processor in the case table in long-term memory." Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Turtle does not teach "*and analyzing the log database to derive at least one weighting factor indicating how relevant the frequently asked questions are to the parsed concepts and keywords*." Molloy does, however, see col. 4, ll. 15-28, "The adaptive learning system is initialized by loading into the system cases which typically were derived from previous

experience," where the claimed "log database" is the referenced database of previous cases. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Molloy's teachings would have allowed Turtle's method to allow "users to capture their collective experience in dealing with real, multi-faceted situations, without having to learn to program expert system logic or spend time maintaining a complex rule base," see Molloy col. 3, ll. 24-37.

Response to Arguments

Applicant's arguments with respect to the 35 U.S.C. 103 rejections have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Sanders whose telephone number is 571-270-1016. The examiner can normally be reached on M-F 9:00a-4:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tim T. Vo/
Supervisory Patent Examiner, Art Unit 2168

/Aaron Sanders/
Examiner, Art Unit 2168
3 April 2009